AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A non-contact passive medical scanning imager for imaging subcutaneous body temperature comprising:

a detector for sensing millimetre wave electromagnetic radiation;

a collector for collecting radiation emitted from a patient and directing that radiation along a collection path to the detector in such a manner that the collected radiation has a defined sensitivity profile across and along substantially the entire length of that path;

scanning means for causing a scan of a target area of the patient, and

isolation means in the path of the collected radiation for preventing signal leakage from the detector being emitted towards the patient's body, ~~preferably~~ wherein the isolation means ~~comprise~~ comprises a quasi-optical isolator.

2. (Currently amended) An imager as claimed in claim 1, wherein the collector comprises ~~a feedhorn, in particular~~ a corrugated feedhorn.

3. (Currently amended) An imager as claimed in claim ~~2~~ 1, wherein the collector comprises a waveguide for supplying radiation to the detector.

4. (Currently amended) An imager as claimed in ~~any of the preceding claims~~ claim 1, wherein the collector is such that the collected radiation has a Guassian sensitivity profile.

5. (Currently amended) An imager as claimed in claim 2 ~~4 when dependent on claim 3 or claim 4~~, wherein the feedhorn is arranged to convert a fundamental Gaussian mode beam of radiation ~~created by the collector~~ into a waveguide mode in which radiation propagates through ~~the~~ a wave guide to the detector.

6. (Currently amended) An imager as claimed in ~~any of claims 1 to 3~~ claim 1 wherein the collector is such that the collected radiation has a Bessel sensitivity profile.

7. (Previously presented) An imager as claimed in claim 6 including an axicon.

8. (Currently amended) An imager as claimed in ~~any of the preceding claims~~ claim 1 wherein the collector includes focussing means.

9. (Currently amended) An imager as claimed in ~~any of the preceding claims~~ claim 1, wherein the scanning means are operable to repeatedly ~~to~~ sweep the collection path through 360°.

10. (Previously presented) An imager as claimed in claim 9, wherein the scanning means comprise a deflector that is rotatable about one axis to scan the collection path in a scanning direction across a body.

11. (Previously presented) An imager as claimed in claim 10 further comprising line-indexing means for moving the collection path in a direction perpendicular to the scanning direction.

12. (Previously presented) An imager as claimed in claim 11, wherein the indexing means are operable to move the deflector linearly along said axis or comprise means for swinging the deflector about a second axis perpendicular to the first axis.

13. (Currently amended) An imager as claimed in ~~any of the preceding claims that~~ claim 1, wherein the imager is operable to form an image from emitted radiation in the frequency range of 10-200GHz, for example 90-100GHz.

14. (Currently amended) An imager as claimed in ~~any of the preceding claims including one or more calibration loads~~ claim 1, further comprising at least one calibration load for emitting millimetre wave radiation at a pre-determined intensity, the ~~apparatus~~ imager being operable to direct said radiation to the detector to enable the ~~apparatus~~ imager to be calibrated.

15. (Previously presented) An imager as claimed in claim 14, wherein the calibration load is provided in the scanning path of the imager, so that the imager can be calibrated for each pass of the collector.

16. (Currently amended) An imager as claimed in claim 14 ~~or claim 15~~, wherein two calibration loads are provided, together with means for maintaining them at different temperatures, the temperatures ~~preferably~~ straddling the range of subcutaneous body temperatures to be imaged.

17. (Currently amended) An imager as claimed in ~~any of the preceding claims~~ claim 1 wherein the detector is linearly ~~polarized~~ polarized.

18. (Currently amended) An imager as claimed in claim 17 further including ~~polarisation~~ polarization means for altering the ~~polarisation~~ polarization of received radiation so as to align with the ~~polarisation~~ polarization of the detector.